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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,287	11/13/2003	Naoki Kusunoki	Q78-442	5668
23373 7590 04/01/2008				
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2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800				
WASHINGTON, DC 20037				
EXAMINER				
ALUNKAL, THOMAS D				
ART UNIT		PAPER NUMBER		
2627				
MAIL DATE		DELIVERY MODE		
04/01/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/706,287

**Applicant(s)**

KUSUNOKI ET AL.

**Examiner**

THOMAS D. ALUNKAL

**Art Unit**

2627

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 14-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Response to Arguments***

Applicant's arguments filed 12/28/07 have been fully considered but they are not persuasive.

Regarding Applicant's arguments beginning on page 7 or Remarks, applicant argues that the use of Official Notice in the rejection of claims 1, 4, 5 was improper. On page 8, Applicant states, "Furthermore, when an assertion of Official Notice is traversed, the Examiner is required to provide the reasoning and evidence in support of any such assertions." The Examiner now cites Taira et al. (US 5,809,003) as providing disclosure of an indication layer being coupled to a storage layer by means of lamination. A further discussion of the Taira et al. reference will be provided in the Detailed Action to follow.

Also regarding claim 1, Applicant argues that Anderson does not disclose where the indication layer has at least a portion of which is rewritable. The Examiner respectfully disagrees. In column 4, lines 35-39, Anderson discloses that the writable label layer may include a phase changing material such as is used for storing data in a CD-RW. Clearly, CD-RW is a rewritable disc format which contains phase changing material that is rewritable. Thus, this argued limitation is disclosed by Anderson.

Regarding claim 2 on pages 8 and 9 of Remarks, Applicant argues that the Examiner's proffered reason for the combination is not supportable. The Examiner respectfully disagrees. More specifically, Nakano provides disclosure of a recording medium (Figure 1, A) on which a label layer is disposed (Figure 1, Element 1). Thus, both Anderson and Nakano disclose recording mediums with label layers for indicating

information related to the disc. The difference between Anderson and Nakano is the type of indication layer disclosed. However, a simple substitution of indicating layers (i.e., substituting an electronic paper in place of the writable label of Anderson) as stated in the previous Office Action is well within the scope of knowledge that is known to one of ordinary skill in the art because the substitution results in a predictable result. Therefore, the previous grounds of rejection for claim 2 are maintained.

Regarding claim 3 on pages 9 and 10 of Remarks, Applicant argues that the Examiner's purported reason to combine is improper. The Examiner respectfully disagrees for reasons similar to those provided for claim 2 above. It is also noted that the structure of the "electronic paper" in claim 2 and the "indication layer" of claim 3 are similar. Araki discloses a recording medium with an indication layer disposed thereon (Figure 3 and Paragraph 0106). Thus, both Anderson and Araki disclose recording mediums with indication layers for indicating information related to the disc. The difference between Anderson and Araki is the type of indication layer disclosed. However, a simple substitution of indicating layers (i.e., substituting an indication layer of a cholesteric layer and a transparent electrode on a light absorbing layer in place of the writable label of Anderson) as stated in the previous Office Action is well within the scope of knowledge that is known to one of ordinary skill in the art because the substitution results in a predictable result. Therefore, the previous grounds of rejection for claim 3 are maintained.

Regarding claim 6 on pages 11 and 12 of Remarks, Applicant argues that Anderson et al. does not disclose "a detecting section detecting a difference between

storage data which is stored at the storage layer of the recording medium, and new data which is to be subsequently store." The crux of Applicant's argument is that Anderson et al. does not disclose detecting a difference between stored data and new data. The Examiner respectfully disagrees. Column 6, lines 9-29, which is used to describe Figure 6 of Anderson et al. recites, "First, information related to the data side of an optical disc is determined. This can include determining the free space and/or used space of the data side of the optical disc. It can also include determining the list of files that are ***or will be stored on the data side of the optical side.***" Here, data that "will be stored" corresponds to new data. Detecting a difference between storage data and new data is inherent because storage data has previously been recorded on the disc and new data has not yet been recorded. Thus, the Examiner believes that Anderson et al. disclosed the argued limitation of claim 6. Therefore, the previous grounds of rejection for claim 6 are maintained.

Regarding claim 16 on page 12 of Remarks, Applicant argues that the rewritable layer of Anderson is not visibly perceived. The Examiner respectfully disagrees. First, no where in Anderson does it disclose that the "visible labels" of the Title are only machine readable. Furthermore, Column 5, lines 53-58 disclose that text, graphics and/or images can be written the labeling side which are also visibly perceived. Therefore, the previous grounds of rejection for claim 16 are maintained.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 24 recites the limitation "The data writing device of ***claim 12***" in line 1. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (hereafter Anderson)(US 6,778,205) and in view of Taira et al. (hereafter Taira)(US 5,809,003).

Regarding claim 1, Anderson discloses a recording medium (Figure 3A), comprising a storage layer for storing data (Figure 3A, Element 202); and an indication

layer for providing indication information relating to the stored data (Figure 3A, Element 300); wherein the indication information can be written at the indication layer (Figure 3A, Element 302), and at least a portion of the indication information which has been written can be rewritten (Column 4, lines 35-38. More specifically, phase changing material allows for areas of the indication layer to be rewritten); wherein said recording medium is substantially planar and circular in shape (Figure 3B). Anderson does not specifically disclose the means used to attach the labeling layer to the data storage layer. In the same field of endeavor, Taira discloses adhering a labeling layer to a disk by a lamination process (Column 7, lines 51-55 and Figure 5A).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the well known lamination adhering of Taira to the recording medium of Anderson, motivation being to securely attach the label layer to the storage layer via a simple manufacturing process.

Regarding claim 4, Anderson discloses wherein the indication information is written by irradiating light in a form of an image onto the indication layer (Column 3, lines 7-10).

Regarding claim 5, Anderson discloses wherein the indication layer has a heat recording layer (Figure 3A, Element 302) at which the indication information can be recorded and deleted by a heat treatment (Column 4, lines 35-38. More specifically, phase changing material allows for areas of the indication layer to be rewritten).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (hereafter Anderson)(US 6,778,205) and Taira, as applied to claims 1,4, and 5 above, and in further view of Nakano (US PgPub 2001/0008872 A1).

Regarding claim 2, Anderson does not disclose wherein the indication layer includes electronic paper. In the same field of endeavor, Nakano discloses an indication layer which includes electronic paper (Paragraph 0020).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the electronic paper of Nakano to the indication layer of Anderson, motivation being to provide a clearly viewable image or text on the indication layer.

Claims 3 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (hereafter Anderson)(US 6,778,205) and in view of Araki et al. (hereafter Araki)(US PgPub 2003/0103762).

Regarding claim 3, Anderson discloses a recording medium (Figure 3A) comprising a storage layer for storing data (Figure 3A, Element 202); and an indication layer for providing indication information relating to the stored data (Figure 3A, Element 302), wherein the indication information can be written at the indication layer, and at least a portion of the indication information which has been written can be rewritten (Column 4, lines 35-38. More specifically, phase changing material allows for areas of the indication layer to be rewritten). Anderson does not disclose wherein the indication layer has a cholesteric layer and a transparent electrode layer on a light absorbing



layer. In the same field of endeavor, Araki discloses a light absorbing layer which has both a cholesteric layer and a transparent electrode (Paragraph 0106).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the light absorbing layer which has both a cholesteric layer and a transparent electrode of Araki to the recording medium of Anderson, motivation being to provide a visible image on the recording medium.

Regarding claim 22, Anderson discloses wherein the storage layer comprises data written in at least one of magnetic and optical form (Figure 1).

Regarding claim 23, Araki discloses wherein the storage layer is read electrically (Figure 17).

Claims 6-7, 9-10, 14-19, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (hereafter Anderson)(US 6,778,205) and in view of Anderson et al. (US 7,145,586).

Regarding claim 6, Anderson discloses a data writing device (Figure 1) to a recording medium having a storage layer for storing data (Figure 3A, Element 300), and an indication layer for providing indication information relating to the stored data (Figure 3A, Element 202), the device comprising: a storing section storing data at the storage layer of the recording medium (Figure 1, Element 100, 108, and 112a); and a writing section writing, at the indication layer, the indication information which relates to the stored data and which is for indication at the recording medium (Figure 1, Elements 100, 108, and 112a). Anderson does not disclose a detecting section detecting a

difference between storage data which is stored at the storage layer of the recording medium, and new data which is to be subsequently stored; and a generating section which, on the basis of results of detection of the detecting section, generates detection data regarding the difference between the data stored at the storage layer and the new data which is to be subsequently stored, and generates indication information which corresponds to the difference, wherein the storing section stores, at the storage layer, the detection data regarding the difference, and the writing section writes, at the indication layer, the indication information which corresponds to the difference. In the same field of endeavor, Anderson et al. disclose a detecting section detecting a difference between storage data which is stored at the storage layer of the recording medium, and new data which is to be subsequently stored; and a generating section which, on the basis of results of detection of the detecting section, generates detection data regarding the difference between the data stored at the storage layer and the new data which is to be subsequently stored, and generates indication information which corresponds to the difference, wherein the storing section stores, at the storage layer, the detection data regarding the difference, and the writing section writes, at the indication layer, the indication information which corresponds to the difference (Figure 6 and Column 6, lines 9-29).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the label updating means Anderson et al. to the data writing device of Anderson, motivation being to accurately display the most current data stored on the medium.

Regarding claim 7, Anderson discloses wherein the indication information can be written at the indication layer, and at least a portion of the indication information which has been written can be rewritten (Figure 3A, Element 302 and Column 4, lines 35-38. More specifically, phase changing material allows for areas of the indication layer to be rewritten).

Regarding claim 9, Anderson et al. disclose wherein the storing section also stores the indication information at the storage layer (Figure 6, Element 606).

Regarding claim 10, Anderson discloses a data memory section for storing the stored data and the indication information (Figure 1, Element 110 and Column 3, lines 56-65. Here, Anderson discloses that logic (Figure 1, Element 110) may include a combination of hardware, firmware, and/or software).

Regarding claim 14, Anderson et al. disclose wherein the storing section also stores, at the storage layer, the indication information which corresponds to the difference (Figure 6, Element 614).

Regarding claim 15, Anderson et al. disclose a data memory section storing the stored data and the indication information which corresponds to the difference between the data stored at the storage layer and the new data (Figure 7. Memory is inherently provided within).

Method claim 16 is drawn to the method of using the corresponding apparatus claimed in claim 6. Therefore method claim 6 corresponds to apparatus claim 6 and is rejected for the same reasons of obviousness as used above.

Regarding claim 17, Anderson discloses wherein said indication information is generated according to a manner of indication received from an external source (Column 1, lines 31-35).

Regarding claim 18, Anderson discloses wherein said external source is a user (Column 1, lines 31-35).

Regarding claim 19, Anderson et al. disclose writing said indication information to said storage layer of said storage medium (Figure 6, Element 606).

Regarding claim 21, Anderson discloses wherein said storage medium is substantially planar and circular in shape (Figure 3A).

Regarding claim 24, Anderson discloses wherein the indication information is visibly perceived (see Title and Column 5, lines 53-58).

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson and Anderson et al., as applied to claims 6-7, 9-10, 14-19, and 21 above, and in further view of Nakano (US PgPub 2001/0008872 A1).

Regarding claims 8 and 20, Anderson and Anderson et al. do not disclose wherein the indication layer includes electronic paper. In the same field of endeavor, Nakano discloses an indication layer which includes electronic paper (Paragraph 0020).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide electronic paper of Nakano to the indication layer of Anderson and Anderson et al., motivation being to provide a clearly viewable image or text on the indication layer.

**Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tamaoki et al. (US 6,197,460) disclose a rewritable heat sensitive, color image recording medium and image recording method using the same.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS D. ALUNKAL whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas D Alunkal/  
Examiner, Art Unit 2627

/Wayne R. Young/  
Supervisory Patent Examiner, Art Unit 2627